Remarks

Entry of the amendments presented, and allowance of the claims at issue are respectfully requested. Claims 7, 9-12, 22-24, 29, 31-34, 44-46, 48, 49, 54, 56-59 & 69-71 remain pending.

Initially, Applicants gratefully acknowledge the indication of allowance of claims 7, 9-12, 22, 23, 29, 31-34, 44, 45, 48, 49, 54, 56-59, 69 & 70. This paper is directed to the remaining claims at issue, i.e., claims 24, 46 & 71.

By this paper, claims 24, 46 & 71 are amended to recite "storing, by a cluster of the distributed computing environment, the original unique identifier in local storage and global storage, providing a local unique identifier copy and a global unique identifier copy". Support for the amended language can be found in allowed claims 22, 44 & 69. It is believed that the amendments to claims 24, 46 & 71 place all claims in condition for allowance. No new matter is added to the application by any amendment presented.

Substantively, claims 24, 46 & 71 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Short et al. (U.S. Patent No. 6,178,529 B1; hereafter Short) in view of Trottier et al. (U.S. Patent No. 4,851,988 A; hereinafter Trottier). This rejection is respectfully traversed, and reconsideration thereof is requested.

An "obviousness" determination requires an evaluation of whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art. In evaluating claimed subject matter as a whole, the Federal Circuit has expressly mandated that functional claim language be considered in evaluating a claim relative to the prior art. Applicants respectfully submit that the application of these standards to the independent claims presented herewith leads to the conclusion that the recited subject matter would not have been obvious to one of ordinary skill in the art based upon the Short and Trottier patents.

As recited in claim 24, for example, Applicants' invention comprises a method of managing identifiers of components of a distributed computing environment is provided which includes identifying a component of the distributed computing environment by an original unique identifier; storing, by a cluster of the distributed computing environment, the original unique identifier in local storage and global storage, thereby providing a local unique identifier

copy and a global unique identifier copy; providing the original unique identifier in response to a cluster event; and automatically updating, by the cluster of the distributed computing environment, one or more of the original unique identifier, the local unique identifier copy and the global unique identifier copy, to provide consistency among the original unique identifier, the local unique identifier copy and the global unique identifier copy, in response to the cluster event.

Applicants respectfully submit that there are numerous differences between their recited method and the teachings, suggestions and implications provided by Short and Trottier.

Short describes a method and system for resource monitoring of disparate resources in a server cluster. The Office Action analogizes applicants' recited functionality of claim 24 with the teachings of Short, in part, at column 2, lines 51-56. This analogy is believed to be in error. Applicants describe in their process: identifying a component of the distributed computing environment by an original unique identifier. This original unique identifier is then stored in local storage and in global storage, thus providing a local unique identifier and a global unique identifier. In applicants' approach, there are three copies of the identifier, i.e., the original unique identifier, the local unique identifier and the global unique identifier. A careful reading of Short fails to uncover any similar discussion of a process for providing three copies of an identifier to identify a component of a cluster of a distributed computing environment, let alone the particular three identifiers set forth in applicants' independent claims.

Column 2, lines 51-56 of Short state:

> "The invention may also be practiced in distributing computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices."

Applicants respectfully submit that the above-cited language from Short does not teach storing by a cluster a unique identifier in local storage and global storage to provide a local unique identifier and a global unique identifier. The language refers to program modules that may be stored in either local or remote memory storage devices, but does not teach or suggest the functionality recited by applicants in the independent claims presented.

Applicants' independent claims further characterize the recited invention as including providing a copy of the original unique identifier in response to a cluster event. For example, in response to a node rejoining the cluster, the unique identifier is obtained during the bootstrap process. Applicants' process further includes automatically updating, by the cluster of the distributed computing environment, one or more of the original unique identifier, the local unique identifier copy and the global unique identifier copy, to provide consistency among the three identifier copies in response to the cluster event. There is simply no similar concept in Short of generating the unique identifier for a component of a cluster, then storing that unique identifier locally and globally, and thereafter, providing the original unique identifier response to a cluster event and automatically updating one or more of the identifiers to provide consistency in response to a cluster event.

The step of automatically updating is believed to be a clear departure from the teachings of the known art. Applicants respectfully submit that the authentication sequence referenced in Short in the Office Action does not equate to the functionality recited by applicants in the independent claims at issue. Applicants are automatically managing content of identifiers and changing that content as appropriate depending upon changes to the cluster of the distributed computing environment. The authentication described by Short does not teach or suggest applicants' recited concept of automatically updating one or more of the identifiers to provide consistency among the identifiers.

The Office Action recognizes that Short does not teach the existence of a global identifier. In this regard, the Office Action references the teachings of Trottier as being relevant to applicants' method. However, applicants respectfully submit that even if the global identifiers described by Trottier are analogized to applicants' recited global unique identifier copy for a particular component of a cluster of a distributed computing environment, as proposed in the Office Action (which they are not), the resultant combined method would still not teach, suggest or imply all of the functional characterizations of applicants' invention as recited in independent claim 24, and as discussed above. In addition, Applicants respectfully submit that the global identifiers discussed in Trottier do not equate to the global unique identifier recited in the independent claims presented. Specifically, Applicants recite storing, by the cluster, the original unique identifier in local storage and global storage. This act of storing by the cluster the unique

identifier in global storage results in creation of the global unique identifier. In contrast, the global identifier in Trottier is not provided in global storage, but rather is a local identifier replicated across the different independent computer systems. In Applicants' claim, global storage means globally accessible storage, while in Trottier, the global identifiers are replicated locally across the computer systems, which is different from the functionality recited in the independent claims presented.

To summarize, applicants' independent claims recite functionality which distinguishes their process from the teachings and suggestions of Short and Trottier, either alone or in combination. Neither patent teaches the existence of three copies of an identifier, that is, the original unique identifier copy, the local unique identifier copy and the global unique identifier copy. Further, neither patent teaches or suggests providing the original unique identifier in response to a cluster event. Still further, neither patent teaches or suggests automatically updating, by the cluster of the distributed computing environment, one or more of the original unique identifier, the local unique identifier copy and the global unique identifier copy, to provide consistency among the three identifiers in response to the cluster event.

For all of the above reasons, applicants respectfully request reconsideration and withdrawal of the obviousness rejection stated in the Office Action.

All claims are believed to be in condition for allowance and such action is respectfully requested.

Should the Examiner wish to discuss this case with applicants' attorney, the Examiner is invited to contact applicants' representative at the below-listed number.

Respectfully submitted,

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